

The Genus *Pterallastes* Loew (Diptera: Syrphidae)

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Abstract: The genus *Pterallastes* Loew is reviewed, its phylogeny and distribution discussed, the key to and figures of its species are given, *Pseudozetterstedtia* Shiraki is synonymized under it, and **bomboides** (China) is described as a new species of it.

INTRODUCTION

The genus *Pterallastes* has been previously known only from the northeastern United States, where it is represented by a single species, *thoracicus* Loew. The discovery of a new *Pterallastes* species from the Szechuan Province of China has prompted a review of the whole genus, the results of which are presented below.

Loew (1863) described *Pterallastes* for two new species but Osten Sacken (1875) later indicated that the two species were not congeneric and restricted *Pterallastes* to *thoracicus* Loew, which he designated as the type species. He erected *Teuchocnemis* for the other species, *lituratus* Loew, including also *Milesia bacantius* Walker. Van der Wulp (1888), unaware of Osten Sacken's restriction of the generic limits of *Pterallastes*, described a new species of *Pterallastes*, *nubeculosus*, from Argentina, which he stated was closely allied to *lituratus*. Thus, even if van der Wulp's statements about relationships of his species to *lituratus* were accurate, his species would be assignable to *Teuchocnemis* Osten Sacken, not *Pterallastes*. However, van der Wulp states the *nubeculosus* has pilose eyes and this character state clearly excludes his species from both *Pterallastes* and *Teuchocnemis*. Two other Nearctic species were originally described in *Pterallastes*, *perfidious* Hunter and *borealis* Cole [=

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colei (Wirth)], but both belong to *Helophilus* (*Anasimyia*) (Curran and Fluke, 1926; Shannon, 1926; Wirth et al., 1965).

The search for the sister group of *Pterallastes* led to the discovery that Shiraki's subgenus *Mallota* (*Pseudozetterstedtia*) was based on a species of *Pterallastes*. An examination of "*Mallota*" *unicolor* Shiraki, the type species of *Pseudozetterstedtia*, revealed that *unicolor* is very similar to *thoracicus*, the type species of *Pterallastes*, and that the differences between the two species are trivial. Thus *Pseudozetterstedtia* is here transferred from *Mallota* and synonymized under *Pterallastes*.

Genus *Pterallastes* Loew

Pterallastes Loew, 1863:317 (also, 1864–201). Type-species, *thoracicus* Loew, subsequent designation by Osten Sacken, 1875:64. Subsequent references: Kertész, 1910:267 (cat. citation, 3 spp. listed); Shannon, 1921:127 and 1922:31 (transfer of genus to Xylotinae), 1926:8 (descr. notes); Hull, 1949:375 (description); Wirth, Sedman, and Weems, 1965: 609 (cat. citation).

Pseudozetterstedtia Shiraki, 1930:199 (as a subgenus of *Mallota*). Type species, *unicolor* Shiraki by original designation. Hull, 1949:394 (descript.); Shiraki, 1968:246 (descript.).

NEW SYNONYM

Head. Higher than long; face bare, completely pollinose in male, frequently shiny medially in female, with a low but distinct medial tubercle in male, concave in female; cheeks broad, broader than long; facial grooves short, extending along lower third of eye margins and only half way to bases of antennae; facial stripes indistinct, narrow, pilose; frontal prominence low, at middle of head; frontal triangle of male short, from about two-thirds as long to almost as long as vertical triangle, bare; vertical triangle of male long, about twice as long as broad at occiput; front of female broad, only slightly longer than broad at base of frontal prominence, slightly longer than face, with convergent sides above, only one-half as broad at ocellar triangle as at base of frontal prominence, bare and shiny on lower third; ocellar triangle clearly before posterior margin of eyes; eyes bare, narrowly holoptic in males. Antennae short, about one-half as long as face; third segment orbicular; arista bare, long, about twice as long as antennae and slightly longer than maximal facial width.

Thorax. Distinctly longer than broad, with long pile but pile not obscuring color of pollinosity; long yellow bristles above wings, on postalar calli, and posterior edge of mesopleura; anterior mesopleura bare; sternopleura with broadly separated dorsal and ventral pile patches; posterior pteropleura bare; hypopleura including barrettes bare; metasterna underdeveloped and bare; postmetacoxal bridge incomplete; metathoracic spiracle small; metathoracic pleura bare; scutellum without distinct ventral pile fringe, with a few ventral hairs laterally and in some specimens with many marginal hairs directed ventrally, usually without apical emarginate rim; in some specimens with an indistinct and shallow apical emarginate rim; legs simple; mesocoxae with three to four bristlelike hairs on posterior surface; hind femora not swollen, with ventral spines, without basoventral setal patches. Wing: marginal cell open; apical cell petiolate, with petiole short, about as long as humeral crossvein; third vein moderately to strongly looped into apical cell; anterior crossvein distinct beyond middle of discal cell, at outer third of discal cell, slightly oblique; anal cell with a long and slightly curved apical petiole; apical and posterior crossveins continuous; apical and discal cells without spurs at their apicoposterior corners.

Abdomen. Oval; first abdominal spiracle embedded in metathoracic epimeron. Male geni-

talia: Cerci simple, pilose; ninth tergum simple, bare; surstyli pilose, triangular in profile, slightly asymmetric; ninth sternum with a ventrolateral membranous area on each side and with a process laterad to this membranous area; lingula absent; superior lobes fused to ninth sternum, pilose dorsobasally, produced into a long curved prong; aedeagus with large earlike lateral lobes, with apical process short and stout.

DISCUSSION

Earlier workers considered that *Pterallastes* undoubtedly belonged with the helophilines because of its looped third vein and open marginal cell. Shannon (1921, 1922) was first to point out the true affinities of *Pterallastes* with the milesine genera (Milesini = Xylotinae *auctorum*). While Hull (1949) recognized six tribes in the Xylotinae, he did not place *Pterallastes* in any of them nor did he place the genus in his key. I (1972) followed Hull's basic arrangement of genera within the Milesini (= his Xylotinae), but I made a few changes. In my arrangement I placed *Pterallastes* in the *Temnostoma* group. I considered that the *Temnostoma* and *Milesia* groups were closely related because both have the lateral lobes of the aedeagus well developed (synapomorphy). I separated the *Milesia* group from the *Temnostoma* group on the basis of the presence of well-developed metasterna and emarginate scutellar rims in most of the genera of the *Milesia* group. However, this separation was not totally satisfactory since the dichotomy is not clearcut; some genera have intermediate conditions of the characters used, leaving the *Temnostoma* group as a symple-siomorphic assemblage. The reevaluation of the phylogenetic relationships of *Pterallastes* has lead me to discard my previous symple-siomorphic grouping of the *Temnostoma* genera and to combine these genera with those of the *Milesia* group on the basis of their common possession of well-developed lateral lobes of the aedeagus.

The sister group of *Pterallastes* is undoubtedly *Palumbia* + *Korinchia*. These three genera are distinguished from all other syrphids by the presence of an abundance of a peculiar type of long bristlelike hair above the wings, on the postalar calli and usually along the margin of the scutellum (synapomorphy). Also, *Pterallastes*, *Palumbia*, and *Korinchia* have the third vein (R4+5) looped into the apical cell, another synapomorphous condition. While other syrphid genera have the looped third vein character state, I consider this character state to be convergent in all these other genera because the following characters, among others, exclude the possibility of a close relationship with either *Pterallastes*, *Palumbia*, or *Korinchia*: All cristaline genera have pilose metasterna and patches of setulae on the hind femora; *Rhinotropidia* and *Parrhyngia*, both tropidines, have carinate faces and hind femora; *Orthroprosopa*, another tropidine, has a pilose and divided metasterna; *Syrittosyrphus*, a milesine, has a well-developed but pilose metasterna; *Dideomimia*, *Salpingogaster*, *Asiodidea*, and *Didea*, all syrphines, have bare humeri and five pregenital segments in

PTERALLASTES

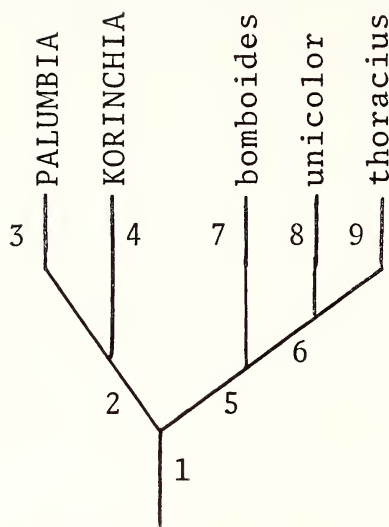
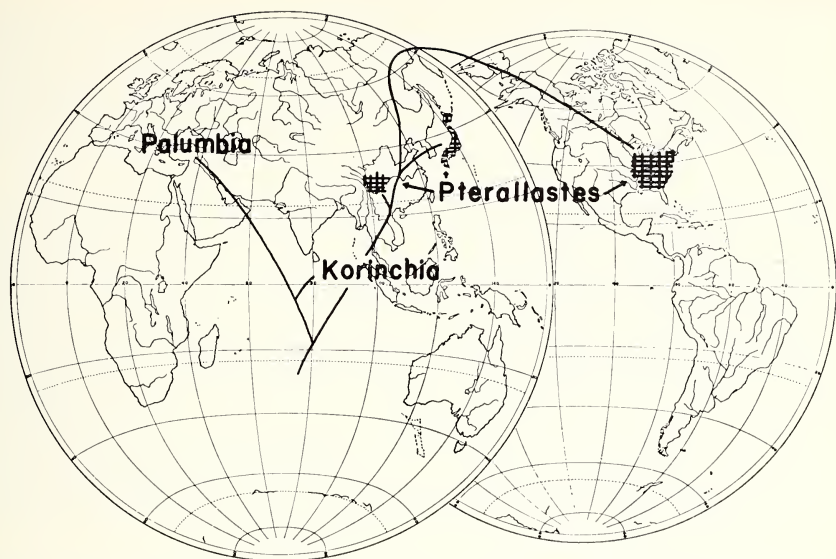


Diagram 1. Phylogenetic relationships of and within the genus *Pterallastes* Loew. The autapomorphic character states used are: 1, the presence of bristlelike pile on the mesonotum, the bare metasterna and looped third vein; 2, the closed and petiolate marginal cell; 3, the absence of a facial tubercle in both sexes; 4, the presence of a single asymmetric ventral membranous area on the ninth sternum (male genitalia); 5, the presence of ventrolateral lobes on ninth sternum (male genitalia); 6, the bifid nature of the ventrolateral lobe on the ninth sternum; 7-9, specialized character states of the species of *Pterallastes* are discussed in the text under the respective species. Genus-group taxa are in capital letters and species are in small letters.

the males. The phylogenetic relationships of *Pterallastes* are given in Diagram 1.

Both *Palumbia* and *Korinchia* have petiolate marginal cells (synapomorphy). *Palumbia* is distinguished from *Korinchia* by its lack of a facial tubercle in the male (autapomorphy) and *Korinchia* is distinguished from *Palumbia* by the presence of a single large ventral membranous area on ninth sternum of the male (autapomorphy). I know of no other external or genitalic characters by which I can distinguish these two genera. Thus I am combining *Palumbia* and *Korinchia*, but I have retained *Korinchia* as a subgenus of *Palumbia*. These changes will be discussed in more detail in another paper.

Distribution and past dispersal. The known distribution of the genus *Pterallastes* (map 1) is significantly enlarged with the addition of *bomboides* (China) and *unicolor* (Japan). The sister group of *Pterallastes* is Oriental (*Korinchia*) and western Palaearctic (*Palumbia*) in distribution; the most plesiomorphic species of *Pterallastes*, *bomboides*, is restricted to the Szechuan Province of



Map 1. Distribution of the genus *Pterallastes* with a diagram of its phylogenetic relationships.

China; the next most plesiomorphic species, *unicolor*, is restricted to Japan; and the most derived species, *thoracicus*, is restricted to southeastern North America. From these facts, the following history of dispersal in the genus *Pterallastes* is postulated: 1) The genus arose in southern China, probably the same area where *bomboides* is now found. 2) Some of the species dispersed northward and eastward, with one ancestral species dispersing over the Bering land bridge to North America. 3) During an ice age, probably the last one, the northern species of the genus were forced to restrict their ranges. 4) *Unicolor* in Japan and *thoracicus* in southeastern North America are the survivors of this last episode of range restriction and extinction.

KEY TO SPECIES

1. Disc of mesonotum bright yellow to orange pollinose; 3rd vein forming a shallow loop in apical cell (Fig. 4); abdomen black with fine yellowish or black pile, not obscuring ground color 2
- Disc of mesonotum dark brownish-black pollinose; 3rd vein forming a strong loop in apical cell (Fig. 5); abdomen with long shaggy yellowish and reddish pile, obscuring ground color on apical segments *bomboides*, n. sp.
2. Abdominal terga shiny, without pollinose markings; sterna yellow pilose, rarely with a few black hairs on last sternum; terga usually completely yellow pilose, rarely black pilose on apical half or less of 3rd and 4th terga; femora usually yellow pilose, except black spinulose on ventral portion of hind femora and rarely with black pile on dorsal edge of hind femora on apical half *thoracicus* Loew

Abdominal terga with gray pollinose markings, 1st tergum all pollinose, 2nd with two large transverse pollinose spots, 3rd with two small basal transverse spots; 4th and 5th sterna (in female) black pilose; apical two-thirds of 4th and all 5th terga (in female) black pilose; anterior four femora black pilose on anterior apical third; hind femora black pilose on apical half ----- *unicolor* (Shiraki)

Pterallastes thoracicus Loew

Pterallastes thoracicus Loew, 1963:317 (also, 1864:201). Type locality: U.S.A., Pennsylvania. Types 1♂ 1♀ Museum of Comparative Zoology. Subsequent references: Banks, 1907:450 (distribution rec.-Virginia); Kertész, 1910:267 (catalog citation, 2 references); Johnson, 1910:770 (distribution recs.-New Jersey); Metcalf, 1913:94 (distribution recs.-Ohio), 1916:107 (distribution recs.-North Carolina); Banks *et al.*, 1916:188 (distribution recs.-District of Columbia); Smith, 1919:273 (distribution recs.-Indiana); Britton, 1920:188 (distribution recs.-Connecticut); Metcalf, 1921:169-214, Figs. 97, 101 (male genitalia); Wehr, 1922:157 (distribution recs.-Nebraska); Johnson, 1925:176 (distribution recs.-Connecticut); Shannon, 1926:9 (distribution notes, type depository); Leonard, 1928:800 (distribution recs.-New York); Curran, 1930:73 (distributional recs.-New York); Brimley, 1938:353 (distribution recs.-North Carolina); Wirth, Sedman and Weems, 1965:609 (catalog citation, Nearctic distribution).

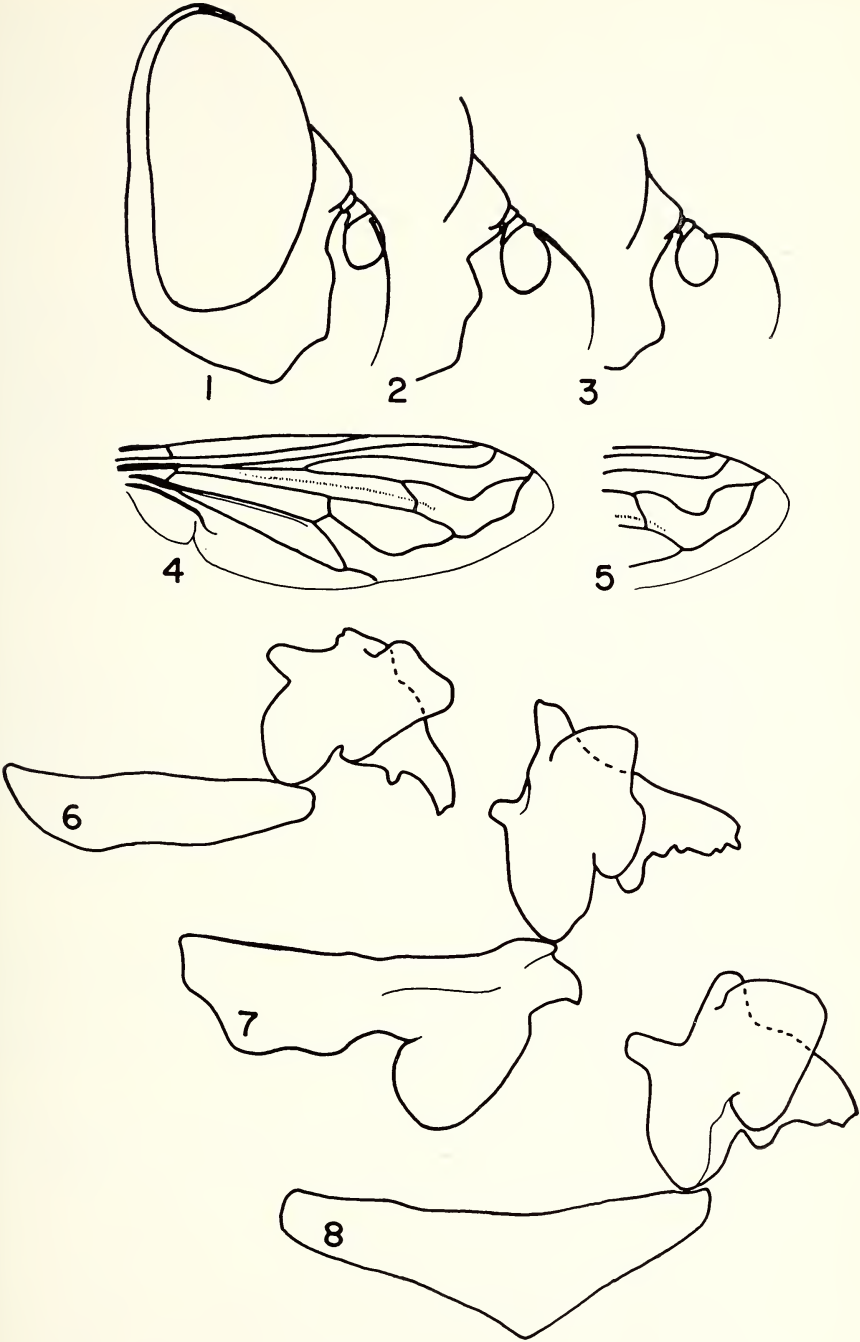
Male. Head: black; face silvery pollinose, with a low medial tubercle, with tubercle lower than frontal prominence; cheeks shiny on anterior half, whitish pollinose and pilose on posterior half; frontal lunule orange; frontal triangle silvery pollinose; vertical triangle silvery pollinose except very sparsely pollinose on ocellar triangle, yellow pilose; occiput silvery-white pollinose and pilose below becoming yellow on upper half. Antennae orange, frequently with brownish tinge; third segment small, only about as large as metathoracic spiracle; arista orange.

Thorax. Dorsum yellow pollinose and pilose, with pile of medium length except long bristlelike hairs above wings and on postalar calli; scutellum yellow pollinose and pilose; pleura silvery pollinose, yellowish to white pilose; squamae and plumulae white; halteres white to orangish; legs black except as follows, yellow femora tibia joints, yellowish basal third of middle tibiae, orange middle and hind tarsi; in some specimens hind metatarsi with brownish tinge; pile yellowish except black on front tarsi and ventral portion of tibiae and hind femora and rarely on dorsal edge of hind femora on apical half. Wings: hyaline or with a slight grayish tinge apically, microtrichose except bare narrowly behind anal vein and in front of auxiliary vein; third vein with shallow loop in apical cell.

Abdomen. black, shiny, with slight metallic bluish luster under strong light; in some specimens appear reddish brown under strong light; usually completely whitish yellow pilose, rarely with black pile on apical portions of third and fourth terga (see below under discussion section). Male genitalia: Surstyli triangular, with ventral margin virtually straight, not produced basoventrally; ninth sternum with ventrolateral membranous area small

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Figs. 1-8. Figs. 1-3. Head of *Pterallastes*, lateral view; 1. *thoracicus* Loew, male; 2. *bomboides*, n. sp., male; 3. *unicolor* (Shiraki). 4-5. Wings of *Pterallastes*; 4. *thoracicus* Loew; 5. *bomboides*, n. sp. Figs. 6-8. Aedeagi of *Pterallastes*, lateral view. 6. *thoracicus* Loew; 7. *unicolor* (Shiraki); 8. *bomboides*, n. sp.



and apicomedial to lateral process, with lateral process bifid and directed apically; superior lobes only pilose dorsobasally, produced into a short broad apical prong with a single large ventral tooth, with a few short bristlelike hairs on ventral tooth; aedeagus with lateral lobes triangular, with apical process slender and longer than in both *bomboides* and *unicolor* and with a single bump on ventral margin.

Female. Quite similar to male except for normal sexual dimorphism; less black pile on legs; lower third of front shiny and upper two-thirds yellow pollinose and pilose; and lower medial third of face frequently shiny.

MATERIAL EXAMINED

The two syntypes in the Loew Collection at the Museum of Comparative Zoology and some 80 additional specimens of both sexes from the following states and counties: Kansas (Douglas); Connecticut (Fairfield); New York (Westchester, New York City); New Jersey (Bergen, Essex, Middlesex); Pennsylvania (Philadelphia, Montgomery, Delaware, Westmoreland); Maryland (Arundel, Prince George, Montgomery, Calvert); District of Columbia; Virginia (Arlington, Fairfax); North Carolina (Buncombe); and Georgia. Some of these specimens were labeled as collected in association with the following plants: *Ceanothus*, *Solidago*, *Viburnum nudum*, and *Castanea dentata*. The earliest collection recorded was 23 May (Virginia); the latest was 7 October (New York), with June and August being the months with the most numerous records. More detailed information about this material is available from the author.

DISCUSSION

The differences between *P. thoracicus* and *unicolor* or *bomboides* are discussed under the latter species. Among the material of *P. thoracicus* examined there was some variation in the extent of black pile on the abdomen—ranging from a few black hairs intermixed with yellow pile on apical portion of the 4th (♂) or 5th (♀) segments to large triangular areas of solid black pile on apical half or more of the third through fourth (♂) or 5th (♀) segments.

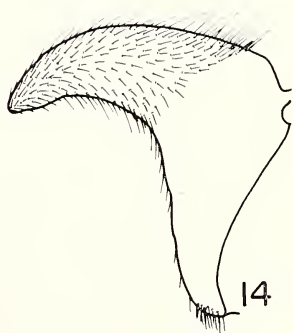
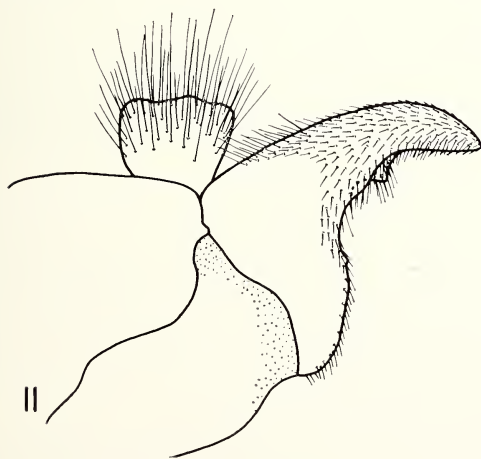
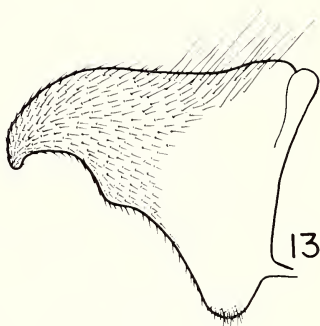
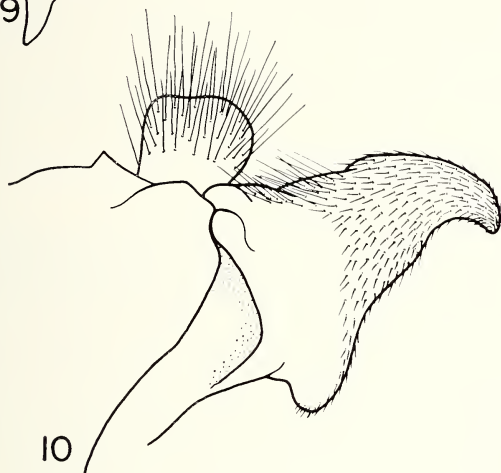
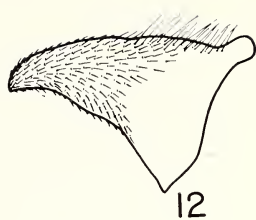
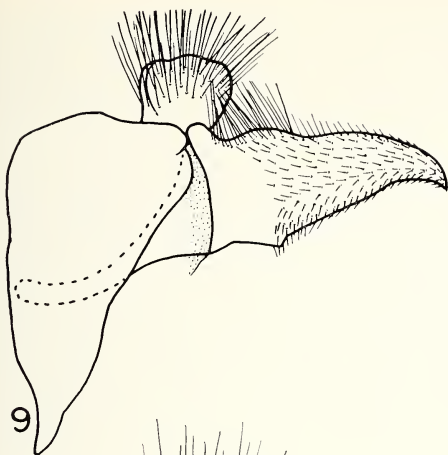
Pterallastes bomboides, n. sp.

Male. Head: black; face silvery pollinose, with a distinct medial tubercle, with tubercle almost as high as frontal prominence; cheeks shiny; frontal lunule yellowish orange; frontal triangle silvery pollinose; vertical triangle grayish pollinose, black pilose; occiput silvery-gray pollinose, white pilose below becoming yellow on upper half. Antennae orange, with brownish tinge in paratype; third segment large, larger than metathoracic spiracle; arista orange.

Thorax. Black; dorsum dark brownish-black pollinose except narrowly silvery-gray pollinose laterally and on scutellum, long shaggy yellow pilose laterally and on scutellum, yellow and black pilose medially and almost completely black pilose behind sutures; pleura

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Figs. 9–14. Figs. 9–11. Ninth tergum and associated structure, of *Pterallastes*, lateral view; 9. *thoracicus* Loew; 10. *unicolor* (Shiraki); 11. *bomboides*, n. sp. Figs. 12–14. Left surstyli of *Pterallastes*, lateral view; 12. *thoracicus* Loew; 13. *unicolor* (Shiraki); 14. *bomboides*, n. sp.



silvery-gray pollinose, long whitish to yellowish pilose; legs black except yellowish tips of femora and bases of tibiae and orangish middle and hind tarsi, yellow to white pilose except black pilose on ventral part of hind femora and apical three tarsal segments; plumulae brown; squamae white with brownish margin and fringe; halteres brown; wings hyaline microtrichose except bare narrowly behind anal vein and in front of auxiliary vein, third vein with a strong loop in apical cell.

Abdomen black, shiny except reddish apical half of fourth segment and genital segments; short black pilose on medial third of second tergum; white pilose on first tergum, sterna, lateral third of second and lateral margins of third terga, long on lateral margins and sterna; long yellowish red pile on third and fourth terga, obscuring ground color; short yellowish pile on genital segments. Male genitalia: Surstyli triangular, strongly concave on ventral margin, with a small triangular inner tooth on ventroapical margin of right surstyli; ninth sternum with ventrolateral membranous area large and posteromedial to lateral process, with lateral process simple and directed ventrally; superior lobe produced into a long slender apical prong, without teeth on ventral margin, generally pilose, with a small tuft of hairs on ventroapical angle; aedeagus with lateral lobes broadly triangular, with apical process stout and with an even ventral margin.

Female. Quite similar to male except for normal sexual dimorphism; lower third of front shiny and upper two-thirds brownish pollinose and black pilose; reddish ground color of abdomen is reduced.

MATERIAL EXAMINED

Holotype and paratype males, CHINA, Szechuan, West of Chetu Pass, near Tatsielu, 13,000 to 14,500 ft; D. C. Graham; allotype female, west of Chego Pass, July 13–18, 1923, D. C. Graham. The holotype and allotype are in the American Museum of Natural History collection; paratype is retained in the author's collection.

DISCUSSION

Besides the differences mentioned in the above key, *P. bomboides* differs from both *P. thoracicus* and *unicolor* in: (1) the facial tubercle is larger and more distinct, not low and obscure; (2) the vertical triangle in male and front and vertex in female is black pilose, not yellow or tawny; (3) the third antennal segment is large, larger than metathoracic spiracle, not the same size; and (4) the plumulae and halteres are brown, not white to whitish orange. The specific name *bomboides* is an adjectival form used as a substantive in the genitive case and alludes to the mimetic similarity to *Bombus*.

Pterallastes unicolor (Shiraki)

Pseudozetterstedtia unicolor Shiraki, 1930:200. Type locality: Japan, Hokkaido, Josankei and Sapporo; Honshu, Wakayama, Towada and Chuzenji. Types ♂ ♀ Ent. Mus., Natn. Inst. Agric. Sci., Tokyo

Mallota unicolor: Sack, 1932:337 [descript., figs. (head)]; Stackelberg, 1950:287 (notes); Violovitsh, 1955:350 [distr. recs. (Kuril Is.), notes]; Violovitsh, 1960:247 [distr. recs. (Kuril Is.), notes]; Shiraki, 1968:246 (descript.).

Male. Head: black; face yellowish white pollinose, with a very low medial tubercle, with tubercle much lower than frontal prominence; cheeks shiny black on anterior half, yellow-

ish white pollinose and pilose on posterior half; frontal lunule brownish yellow; frontal triangle yellowish white pollinose; vertical triangle yellowish white pollinose anteriorly, slightly more brownish yellow pollinose posteriorly, tawny pilose; occiput yellowish white pollinose and pilose below becoming more orange or tawny yellow on upper half. Antennae brownish orange, black pilose; third segment small, oval, only about as large as metathoracic spiracle; arista brownish orange.

Thorax. black; dorsum orange yellow to deep orange pollinose and pilose, with pile of medium length except long bristlelike hairs above wings and on postalar calli; scutellum the same as dorsum; pleura more or less grayish pollinose, with meso-, ptero-, and sternopleura distinctly gray pollinose, yellow pilose; squamae and plumulae orange; halteres white to orange; legs: black, except yellowish brown femoral-tibial joints and basal segments of middle tarsi; coxae and front four trochanters yellow pilose, with pile bristlelike on coxae; anterior four femora whitish yellow pilose except black on anterior apical half; anterior tibiae black pilose except for scattered yellow hairs on posterior half; anterior tarsi all black pilose; middle tibiae whitish yellow pilose except black pilose on apical ventral half; middle tarsi yellow pilose with apical segments with some black hairs intermixed; hind trochanter with black setulae; hind femora whitish yellow pilose on basal half, black pilose on apical half and with black setulae on ventral edge; hind tibiae whitish yellow pilose on basal half, black pilose on apical half; hind tarsi all black pilose. Wings: hyaline or with a slight grayish tinge apically, microtrichose except bare narrowly behind anal vein and in front of auxiliary vein; third vein with a moderately shallow loop in apical cell.

Abdomen black; venter gray pollinose, white pilose on first through third sterna, with fourth sternum black pilose; first tergum grayish pollinose and yellow pilose; second tergum with a pair of large transverse yellowish gray pollinose spots, elsewhere brownish gray pollinose, yellow pilose; third tergum with narrow basal transverse yellowish gray pollinose spots, elsewhere brownish gray pollinose except slightly shiny submedially, yellow pilose, except usually with a few black hairs on apical margins, rarely all black pilose on apical third; fourth tergum with yellow gray pollinose basal transverse spots similar to those on third but very narrow, black pilose except yellow pilose on basolateral corners, male genitalia black pilose, sparsely grayish pollinose. Male genitalia: surstyli triangular, slightly concave on ventral margin, without any teeth; ninth sternum with ventrolateral membranous area small and apicomедial to lateral process, with lateral process bifid and directed slightly dorsoapically; superior lobes only pilose dorsobasally, produced into long slender apical prong with three large ventral teeth, with two long bristles on ventroapical margin; aedeagus with lateral lobes almost rectangular in shape, with apical process more slender than in *bomboides* and with ventral margin very irregular.

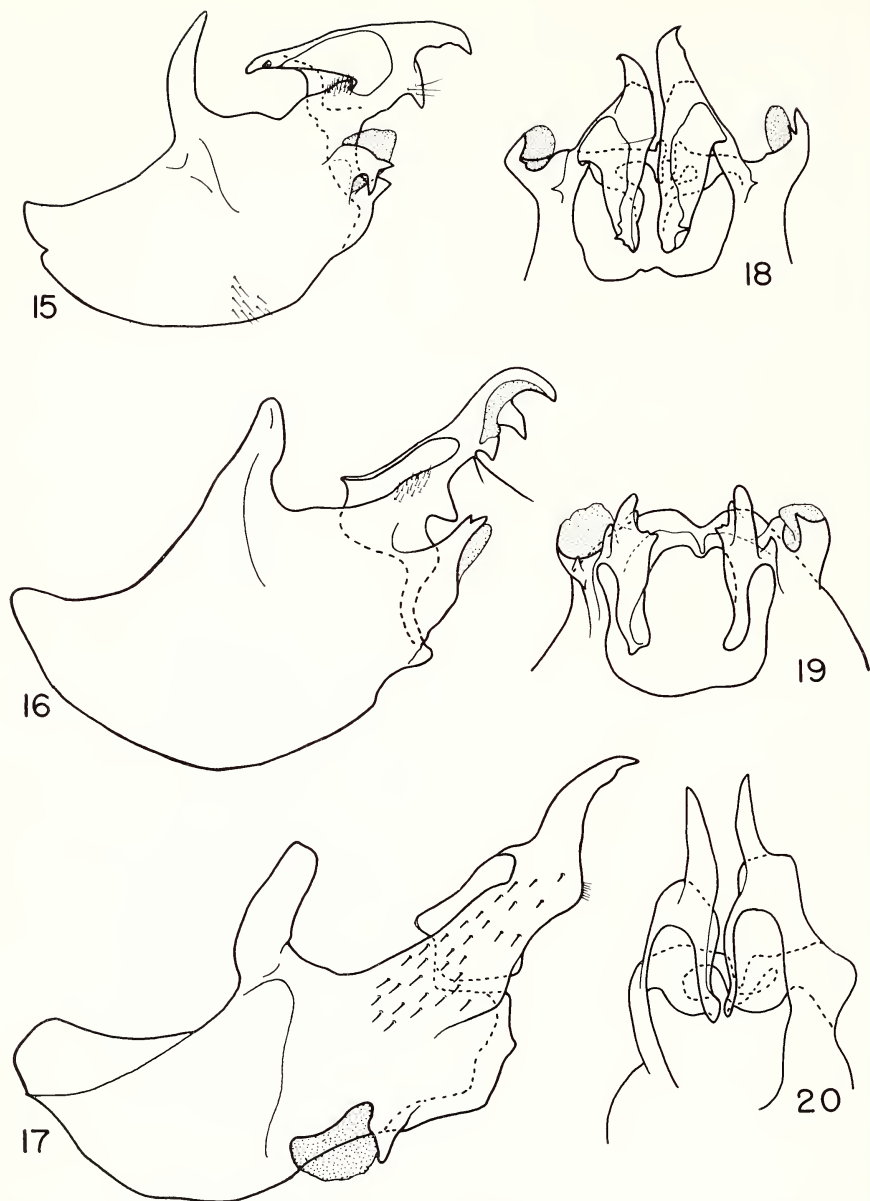
Female. Quite similar to male except for normal sexual dimorphism; lower third of front shiny and upper two-thirds orangish-yellow pollinose and pilose; fifth abdominal segment black pilose.

MATERIAL EXAMINED

JAPAN, Honshu, Iwato, 840 m, 21 July 1971, 1♂, V. S. van der Goot and J. A. W. Lucas (FCT).

DISCUSSION

P. unicolor is very similar to *thoracicus* differing principally in the structure of the male genitalia; in the gray pollinose marking on abdominal terga; and in the pile and pollinosity that are tawny orange, not pale yellow. Also, *P.*



Figs. 15-20. Figs. 15-17. Ninth sternum and associated structures of *Pterallastes*, lateral view; 15. *thoracicus* Loew; 16. *unicolor* (Shiraki); 17. *bomboides*, n. sp. Figs. 18-20. Apical half of ninth sternum and associated structure of *Pterallastes*, dorsal view; 18. *thoracicus* Loew; 19. *unicolor* (Shiraki); 20. *bomboides*, n. sp.

unicolor has more extensive black pile on the legs and abdomen than the typical specimens of *thoracicus*.

"*Pterallastes*" *nubeculosus* van der Wulp

? *nubeculosus* van der Wulp, 1888:372 (*Pterallastes*). Type locality: Argentina, Prov. Tucuman. Type ♂ (lost, see below). Subsequent references: Kertész, 1910:267 (cat. citation, 1 reference); Brèthes, 1907:293 (cat. citation); Fluke, 1957:1555 (cat. citation).

"Brownish-black antennae and arista, femoral apices, tibiae and tarsi rufous; eyes strongly pilose; front, thorax scutellum and abdomen densely ocher-yellow pilose; wings hyaline, base and costa cinereous clouded.

"Properly fitting the generic characteristics of the genus *Pterallastes* Loew and appears closely allied to the North American species *Pt. lituratus* Loew, but nevertheless in many respects distinct from it.

"Ground color brownish-black, shiny, with scutellum brownish red. Face pale yellowish pollinose, the obvious facial tubercle and oral margin¹ shiny, on the sides with similar colored pile; vertical triangle very small; eyes pilose; occiput behind eyes pale yellowish pollinose, with pile similarly colored, darker above. Antennae reddish brown, arista of a lighter color. Front, thorax and scutellum with rather thick light ocher-yellow pile; similar pile on abdomen, mostly on sides and on hind edges of segment, anus curved down ventrally. Legs blackish brown, tips of femora, tibiae and tarsi of a lighter color, almost reddish yellow; hind femora thicken in the middle, hind tibiae curved. Halteres yellow. Wings hyaline, with base and front edge reddish gray clouded.

"One ♂, prov. Tucuman, Argentina."

DISCUSSION

"*Pterallastes*" *nubeculosus* van der Wulp has not been recognized since its original description, which is translated above. Van der Wulp states that his species "properly" fits the generic characteristics of *Pterallastes*, which were given by Loew as "*Pterallastes forma ac figura totius corporis, praecipue capitis, et pictura Myoleptam simulans, alas Helophili habet.*" The principal character states, which Loew was probably referring to in his description, are the sexually dimorphic face of *Myolepta* and the looped third vein and open submarginal cell of the helophilines. Since van der Wulp had only a male of his species it was impossible for him to know whether his species had a sexually dimorphic face as in *Myolepta* or *Pterallastes* but clearly it is safe to assume that his species had the looped third vein and open submarginal cell. The combination of these two character states, along with the pilose eyes, restricts the placement of van der Wulp's species to either *Mallota* or *Quichuana* among the known neotropical syrphids. It is always possible that van der Wulp's species could represent a new genus, but I think this possibility is highly unlikely.

¹ The original text for this phrase is: "*die de duidelijke gezichtshult en den mondrad vrij laat,*" which literally translates as "the obvious facial tubercle and mouthedge leaving free." I have assumed this to mean that the oral margin and facial tubercle are "free" from pollinosity.

Unfortunately it appears that the type of *nubeculosus* is lost. Dr. J. R. Vockeroth, at my request, searched for this type while examining the various collections that contain van der Wulp material, but he was unable to find any trace of it. In van der Wulp's paper there is no mention of any particular collection in which the material was deposited, only that the material came from Prof. H. Weyenbergh, Jr. According to Horn and Kahle (1937:301) all the Weyenbergh material was destroyed. Thus, if van der Wulp did return the material to Weyenbergh, it is lost. Dr. G. B. Fairchild (*in litt.*) also was unable to find the type of another species (*Pangonia lasiophthalma*) described in the same paper.

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